

## WARMING AND VENTILATING.

TO THE EDITOR.

SIR,—Great press of other business must form my apology to you and the readers of *THE BUILDER* for neglecting to notice last week T. H. C.'s plan for warming and ventilating. In a former paper I have asserted the fact, that more than thirty years ago I made myself perfectly familiar with Professor Melaner's plan for warming and ventilating with hot air. T. H. C. is, therefore, far from being the original inventor of that system. Like many others who have followed Melaner, if he had published the delineation of his plan and sections of building at the time of their completion, he might probably have been successful in obtaining orders; and, also, like them, in destroying the vitality of the atmosphere with poisonous effluvia.

The plan exhibited is as dangerous as that in the princely palace at Dusseldorf, which set a bedstead on fire, and as unwholesome as that in the Long-room of the Custom-house; of which the gentlemen there employed made, with so much reason, such loud complaints. Eight years ago, I saw at Cumberland-place, an apparatus on the same principle, upon the ventilators of which water might be boiled. The proprietor came to my house to ascertain the difference of atmosphere produced by my apparatus and his own. He also invited me to accompany him, on his return, to witness the boiling of water on the ventilators in his drawing-room. About six months afterwards the same gentleman, besides many others in the course of that time, came to my house, and while standing opposite the entrance of warm air, was unconscious whence the warmth proceeded until I pointed out the fact, of the warm air gently breathing upon him.

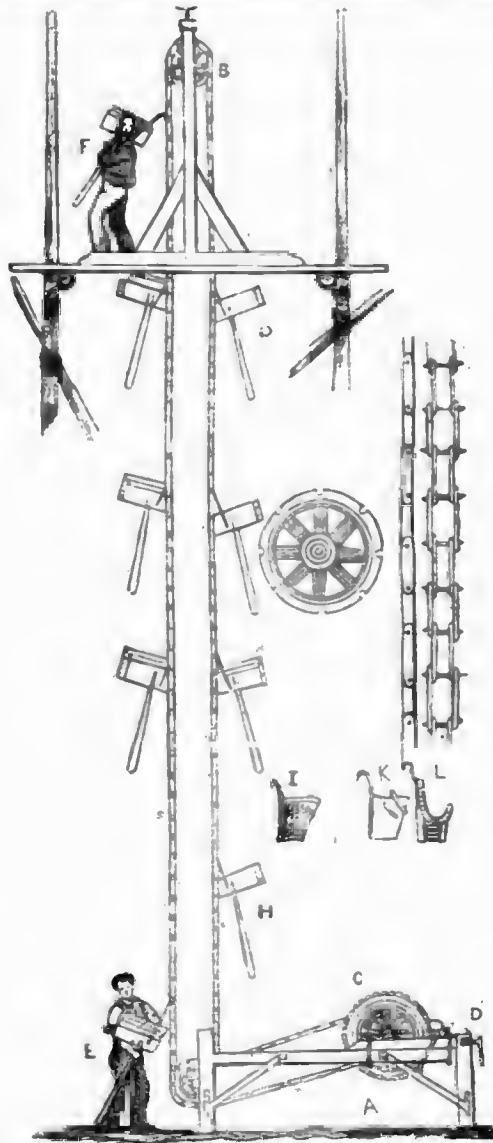
About fourteen years ago the royal stove-manufacturer of Berlin advertised a stove of wondrous merit, from which no smoke could escape, because it was obliged to return to the fire, by which it was entirely consumed. Some weeks afterwards, I was called to an ambassador's residence in William-street, to examine the atmosphere produced by the said stove, and to direct its improvement. This I did, also advising the proprietor of the house to report to the Commissioner of Police (called president), apprising him that the lives of the people were in danger wherever such apparatus was fixed in a room. The authorities at Berlin, well aware of my judgment in such matters, published a notice in all the newspapers, that all persons selling such poisonous apparatus within the kingdom of Prussia should be prosecuted and punished. Such a notice would, no doubt, have saved many valuable lives in this country during the last eight years; but henceforth, it is hoped, that a faithful exposition of the merits and demerits of the most important inventions, widely circulated by *THE BUILDER*, will quickly supersede the necessity of all authoritative interference in such matters. I have to thank you much for your very liberal notice of my last communication, which I feared would be found too lengthy for one insertion; but, I trust it will be deemed but an act of justice to me and my system, to give early or convenient insertion to the most important testimonials, of which I esteem not the least that of Dr. Toulmin. Other portions of my last communication I did esteem of considerable value, entirely to remove all prejudice from minds imperfectly informed on the subject, but I must willingly and gratefully bow to your superior judgment in respect of publication, and with great pleasure rely upon your honour to give insertion to such further portions as you may deem essential to a clear understanding of the merits of the case. Fully aware of the difficulties of your position, and again thanking you for your enlightened and impartial treatment of the subject,

I remain, Sir, most respectfully,

F. A. BERNHARDT.

August 16th, 1843.

**THE REBUILDING OF EXETER CHANGE.**—The old adage, "out of sight out of mind," is not true as regards this once ancient and venerable pile. The Marquis of Exeter, with a spirit worthy his high and honourable name, is about to restore the building so dear and familiar to our boyish recollections; the erection of a new and elegant arcade from the lower end of Catherine-street, in the Strand, to King-street, Covent-garden, is already commenced, which building will be known by the name of "Exeter Change." The architecture of the principal entrances of the proposed arcade is of the Elizabethan style, with red brick and stone, and the interior, having a curvilinear roof of glass the entire length of the building, will be fitted up with shops, exclusively appropriated to the sale of hardware, as in the ancient building. The whole will be erected at the sole cost of the noble marquis. The architect is Mr. Sydney Smirke, Messrs. Grissell and Peto the builders.



DOCTOR SPURGIN'S MACHINE FOR HOISTING BRICKS, MORTAR, &amp;c.

In No. 25 of *THE BUILDER* we gave a description of Dr. Spurgin's machine, and at the same time expressed a hope to be able to illustrate it in a future number. That hope we are now enabled to realize, and to make the illustration perfectly clear to our readers, we transcribe the words of Dr. Spurgin:—

"The main part of the machine rests upon the ground (fig. A).

"The second part of the machine is a trestle, which may be placed upon the scaffolding of the bricklayers (fig. B); in the upper part of this trestle is a wheel which corresponds perpendicularly with another wheel (fig. C) attached to the principal body of the machine resting on the ground.

"The wheel C is put in motion by one or several men, who turn the handle (fig. D) by which the chain operates its rotation. The workmen attach their hods full of materials, as at fig. E, and others detach them (fig. F) to carry them to the bricklayers. The empty hods are attached to the chain as at fig. G, and they are detached as at fig. H.

"The chain may be lengthened and shortened as necessary. When a story is added to the scaffolding, the trestle is placed upon the new story, and the chain lengthened as required.

"The figures I K L are accessories used for hoisting the materials; viz. I for the broken bricks, K for the water, and L for the pieces of stone for windows, chimneys, &c.

"At the top (fig. C C) is a screw for tightening or relaxing the chain, as occasion may require."

Dr. Spurgin conceives he has accomplished certain desirable ends.

"1st. To relieve the workman from the most tedious part of his labour, by doing away with the practice of ascending the ladder.

"2nd. To prevent as far as possible the accidents arising from this practice, to which he so often falls a victim.

"3rd. To enable building operations to be carried on with much greater expedition than heretofore. And,

"4th. To diminish the cost of such works.

"Of late years building in England has been carried on to an extent formerly unknown; houses are now, for the most part, raised to four or five stories, where two or three used to be the height; the consequence is that the labour of the men employed in conveying the materials for the building has become much more severe than it was, and their strength fails and becomes unequal to the task imposed on them.

"To explain the immense advantage which the machine offers in expediting the work of building, and diminishing the expense of raising the bricks and mortar, it seems to be unnecessary to do more than to refer to the following

"DYNAMICAL TABLE OF THE STRENGTH OF A MAN."

Height.	A Minute.	An Hour.	Ten Hours.
to 10 feet	90 bricks	5,400	34,000
" 20 "	45 "	2,700	27,000
" 30 "	30 "	1,800	18,000
" 40 "	22 "	1,350	13,500
" 50 "	18 "	1,050	10,500
" 60 "	15 "	900	9,000

"Messrs. Grissell & Peto and Mr. Cubitt have adopted the machine, and have it in use at this time, the former at the New Houses of Parliament, the latter at Prince Albert's Gate, Hyde Park (as stated by us), and other eminent contractors have also certified in favour of the invention."

"We understand that licenses are granted by Mr. Journet, of No. 2, Chester-terrace, Easton-square, Pimlico.